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Amendment Date: February 11, 2008
Serial No. 10/767,833

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IN THE CLAIMS

Claim 1. (Currently Amended) A method of determining protection transmission unit allocation on a protection cycle on a communication network by nodes on the protection cycle, the method comprising the steps of:

distributing connection information associated with flows on the protection cycle to all nodes on the protection cycle;

upon occurrence of a failure on the protection cycle, determining, by each node on the protection cycle, which flows are affected by the failure on the protection cycle;

assessing connection information on the protection cycle;
determining, by each node on the protection cycle, the protection transmission unit allocation for the flows affected by the failure a protection transmission unit allocation from said the connection information associated with the affected flows.

Claim 2. (Currently Amended) The method of claim 1, wherein the connection information comprises A/Z information, where A represents the location where the flow enters the protection cycle and Z represents the location where the flow leaves the protection cycle.

Claim 3. (Original) The method of claim 2, wherein the connection information further comprises connection ID information.

Claim 4. (Currently Amended) The method of claim 1, wherein the protection cycle is a ring on the communication network and wherein the step of assessing connection information comprises determining connections affected by a failure on the ring.

Claim 5. (Currently Amended) The method of claim 4, wherein the step of assessing connection information determining the protection transmission unit allocation is performed only after receipt of upon receiving notice of a the failure on the ring.

Claim 6. (Canceled)

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Claim 7. (Currently Amended) The method of claim 1, wherein the communication network is based on an optical transport technology, and wherein the step of determining a protection transmission unit allocation comprises determining transmission times for the flows connections according to the connection information.

Claim 8. (Canceled)

Claim 9. (Currently Amended) The method of claim 1, wherein the protection cycle is a logical restoration path p-cycle on the communication network, and wherein the communication network is a mesh network.

Claim 10. (Canceled)

Claim 11. (Currently Amended) The method of claim 1 claim 10, wherein the protection cycle is a ring, wherein the nodes are nodes on the ring, and wherein the connections are connections that are provisioned through at least two nodes on the ring.

Claim 12. (Currently Amended) The method of claim 1 claim 10, wherein the communication network is at least one of a SONET and SDH based network, wherein the protection cycle is at least one of a SONET ring and an SDH ring, and wherein the protection transmission unit allocation is a time slot on the ring.

Claim 13. (Currently Amended) The method of claim 1 claim 10, wherein the protection cycle has a working path and a protection path, wherein connections are transmitted in time slots on the working path, and wherein the protection transmission units are time slots on the protection path.

Claim 14. (Original) The method of claim 13, wherein the protection cycle has two working paths and two protection paths, wherein time slot interchange is permitted on the working path, and wherein time slots are allocated on the protection path.

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Claim 15. (Original) The method of claim 14, wherein extra traffic may be carried on the protection path, and wherein time slot interchange is permitted for the extra traffic on the protection path.

Claim 16. (Currently Amended) The method of claim 1 claim 10, wherein the communication network is a mesh network, wherein the protection cycle is a logical restoration path on the mesh network.

Claim 17. (Currently Amended) The method of claim 16 17, wherein the connection information for connections protected by the logical restoration path is disseminated to nodes on the logical restoration path.

Claims 18-19. (Canceled)

Claim 20. (Currently Amended) The node of claim 1 claim 19, wherein the control logic is further configured to determine protection transmission unit allocation according to connection information further comprises connection size information associated with the connections.